SONY

3-754-913-21(1)AJ

FM Stereo/FM-AM Tuner

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

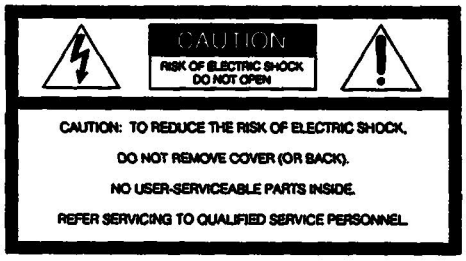
OWNER'S RECORD

The model and serial numbers are located at the rear. Record the serial numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. ST-JX521 Serial No._____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

* The graphical symbols are on the rear enclosure.

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Precautions

On safety

- Operate the unit only on 120 V AC, 60 Hz.
- The name plate indicating operating voltage, power consumption, etc. is located on the rear of the unit.
- Should any solid object or liquid fall into the unit, unplug it and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.

On installation

- Place the unit on a level surface.
- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Good air circulation is essential to prevent internal heat buildup in the unit. Place the unit in a location with adequate air circulation. Do not place the unit on a soft surface.

On cleaning the cabinet

Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

On repacking

Do not throw away the carton and the packing material. It makes an ideal container to transport the unit in.

For the customers in the U.S.A.

For detailed precautions, see the leaflet "IMPORTANT SAFEGUARD".

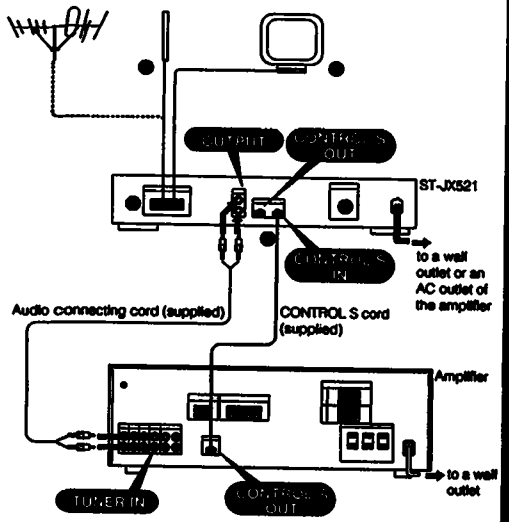
If you have any question or problem concerning your unit, please consult your nearest Sony dealer.

CAUTION

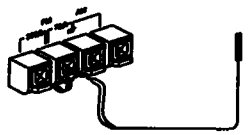
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

- Connect the AC power cord last. Make sure power is off.
- Cord plugs and jacks are color coded. Red plugs and jacks are for right channel (R) and white ones for the left channel (L).
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Keep speaker cords, connecting cords and power cords away from the AM loop antenna and the tuner's antenna lead-in to avoid possible noise pickup.

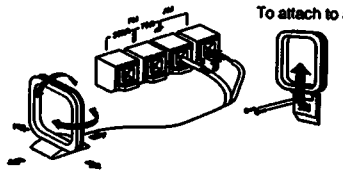
The numbers correspond to the following details.


ST-JX521
to a wall outlet or an AC outlet of the amplifier
Audio connecting cord (supplied)
CONTROL S cord (supplied)
Amplifier
to a wall outlet

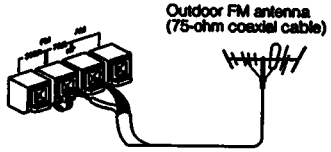
● FM wire antenna (supplied)



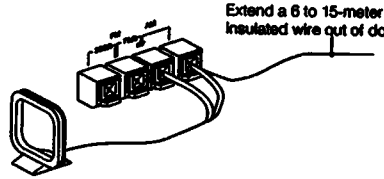
● AM loop antenna (supplied)



For better FM reception



For better AM reception

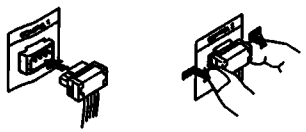


It is also necessary to connect the supplied AM loop antenna.

● CONTROL S cord (supplied)

IN: Connect to the CONTROL S OUT connector of the Sony amplifier for whole audio system remote control.

OUT: Connect to the CONTROL S IN connector of other Sony equipment with the CONTROL S cord for whole audio system remote control.



Push in until it clicks. To disconnect.

● AC OUTLET

Use this to power an audio component whose power consumption is less than the wattage indicated on the AC OUTLET.

CAUTION

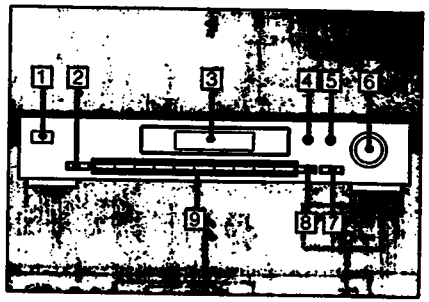
Do not connect any electical home appliances such as an iron, fan, TV or other high wattage equipment to the AC OUTLET.

● Antenna Ground

To prevent hum, connect the ground wire to ANTENNA ground terminal (⏚). When an outdoor antenna is installed, be sure to connect the ground wire for lightning protection.

Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.



1. **POWER switch**
2. **SHIFT button**
3. **Display window**
4. **MEMORY SCAN button**
5. **AUTO TUNING button**
6. **TUNING control**
7. **BAND FM/AM selector**
8. **MEMORY button**
9. **Numeric buttons**

To change the AM tuning interval

The AM tuning interval is preset at the factory to 10 kHz to match the frequency allocation system of your country. To change the interval, proceed as follows.

1 Press the POWER switch to turn on the unit.
2 Set the BAND FM/AM selector to AM.
3 Press the POWER switch to turn off the unit.
4 Hold the TUNING knob in the "+" position, and then press the POWER switch to turn on the unit.

To reset the interval, follow the same procedure.

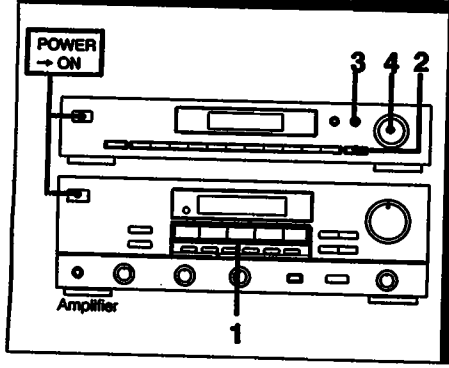
Note

When the interval is changed, all stored stations will be erased from the memory. After changing the interval, be sure to store the stations again.

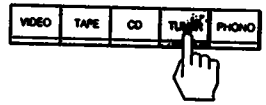
Receiving Broadcasts

Tuning in Automatically

Before reception, be sure to connect the supplied AM and FM antenna.



1 Set the amplifier to the tuner mode.



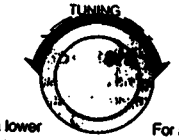
2 Press BAND FM/AM to select the band.

"FM" or "AM" appears in the display window.

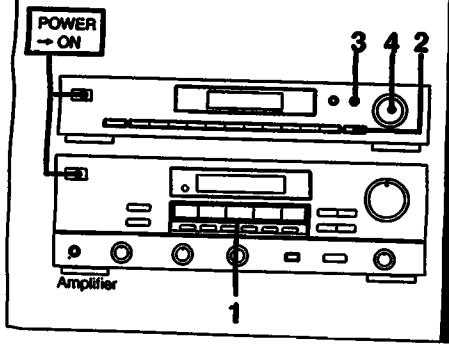
3 Press AUTO TUNING to set to the AUTO TUNING mode.

"AUTO" appears in the display window.

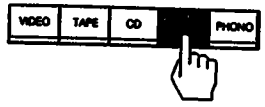
4 Turn TUNING to select the station.



Tuning in Manually



1 Set the amplifier to the tuner mode.



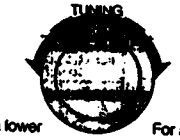
2 Press BAND FM/AM to select the band.

"FM" or "AM" appears in the display window.

3 Press AUTO TUNING to release the AUTO TUNING mode.

"AUTO" disappears in the display window.

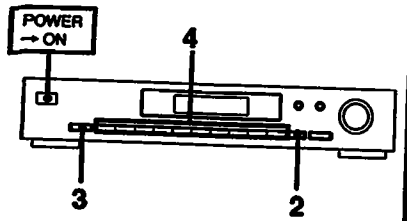
4 Turn TUNING to select the station.



Indicators in the display window

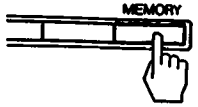
- "TUNED" appears when a stations is tuned in.
- "STEREO" appears when an FM stereo program of sufficient signal strength is received.

Storing Station Frequencies into Memory



1 Tune in a desired station.

2 Press MEMORY so that "MEMORY "appears on the display.

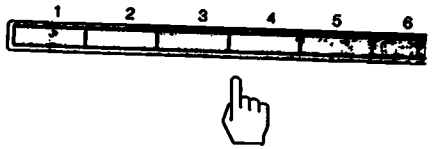


3 While "MEMORY" appears on the display, press SHIFT to select the memory page (A, B or C).

A-1, A-2, ...A-0
B-1, ...B-0
C-1,.....C-9, C-0

Each time SHIFT is pressed, A, B or C is indicated cyclically.

4 While "MEMORY" appears, select the number with the numeric buttons.

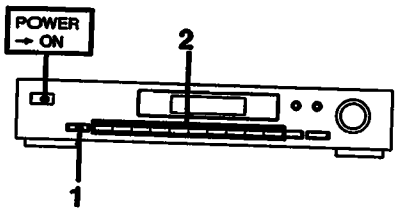


How many stations can be stored ?
Up to 10 stations can be stored in any order for each alphabet (A, B, C). Therefore, 30 stations can be stored in total.

If you cannot store a station successfully
You can store a station only while "MEMORY" is displayed. If the "MEMORY" indicator has gone off, press MEMORY again.

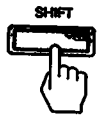
How long does a station remain stored?
- Storing a new station on a used code erases the previously stored one.
- The stored station is maintained for approximately one month even if the power remains off.

Tuning into a Stored Station Directly



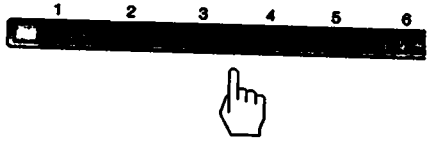
Press SHIFT to select the memory page (A, B orC).

A-1, A-2,.....A-0
B-1,.....B-0
C-1,.....C-9, C-0

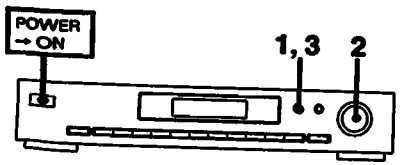


Each time SHIFT is pressed, A, B or C is indicated cyclically.

2 Designate the number with the numeric buttons.



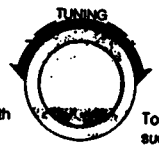
Scanning Stored Stations — Memory Scanning



1 Press MEMORY SCAN.

The code indicator flashes in the window.

2 Turn TUNING to scan stations.



To scan stations with preceding codes

To scan stations with succeeding codes

Stored stations are tuned in successively.

3 Press MEMORY SCAN as soon as the desired station is received.

The scanning stops.

Which stations are skipped during memory scanning?
The memory scan will skip stations which have a very weak signal.

If you cannot scan successfully
Turn the TUNING knob while the code indicator is flashing

Troubleshooting

Before going through the check list below, first refer back to the connection and operating procedures.
Should any problem persist after you have made these checks, consult your nearest Sony dealer.

Trou[illegible]	Cause	[illegible]
No sound.	Switches of the amplifier are wrongly set.	Set them correctly.
Unable to receive stored stations.	Frequency is incorrectly stored.	Store the correct frequency.
STEREO indicator blinks.	Antenna direction and location are not correct.	Check the setting of antenna.
	Different frequency is used from that of the broadcasting station.	Set to the correct frequency.
	Signal is too weak.	Connect an external antenna for FM.
Too many noises.	Picking up noises from other electrical apparatus.	Move the tuner and antenna lead-in wire away from the noise sources.
	Antenna direction and location are not correct.	Check the setting of the antenna.
	Antenna wire collects unnecessary radio waves or noises.	Replace it with a coaxial cable.
	There are working TVs, transceivers and amateur wireless units in the vicinity.	Do not use noise-producing apparatus near the tuner.
	One antenna is used for more than two tuners, or with a TV set.	Use a distributor.
Unable to scan stored stations.	TUNING is not operated.	First press MEMORY SCAN and then turn TUNING.

Specifications

FM tuner section

Tuning range	87.5 – 108 MHz
Antenna terminals	75 ohms unbalanced 300 ohms balanced
Intermediate frequency	10.7 MHz
Sensitivity (at 50 dB quieting)	22.1 dBf, 7 µV (mono), 42.1 dBf, 70 µV (stereo)
Usable sensitivity	19.5 dBf, 5 µV (IHF)
Signal-to-noise ratio (at 75 kHz deviation)	80 dB (mono), 75 dB (stereo)
Harmonic distortion	0.3% (mono), 0.5% (stereo) at 1 kHz
Separation	35 dB at 1 kHz
Frequency response	30 Hz – 15 kHz $^{+0.5}_{-3.0}$ dB
Selectivity	55 dB at 400 kHz
AM suppression ratio	54 dB
Image response ratio	50 dB
IF response ratio	90 dB
Spurious response ratio	70 dB
Automatic tuning threshold	17.8 µV (30 dBf)
Output	775 mV, 4.7 kilohms (at 75 kHz deviation)

AM tuner section

Tuning range	530 – 1,710 kHz (10 kHz)
Antenna	AM loop antenna, External antenna terminal
Intermediate frequency	450 kHz
Usable sensitivity	AM loop antenna: 500 µV/m (1,000 kHz)
Signal-to-noise ratio	54 dB
Harmonic distortion	0.5%
Selectivity	38 dB (10 kHz)

General

Power requirements	120 V AC, 60 Hz
Power consumption	8 W
AC outlet	1 unswitched, 120 W/1 A max.
Dimensions	Approx. 430 x 80 x 295 mm (w/h/d) (17 x 3 1/4 x 11 5/8 inches)
Weight	Approx. 2.6 kg (5 lb 12 oz)
Accessories supplied	CONTROL S cord (1) Audio connecting cord (1) AM loop antenna (1) FM wire antenna (1)

Design and specifications are subject to change without notice.

Sony Corporation Printed in Malaysia